

REMARKS

Favorable reconsideration and allowance of this application are requested.

1. Discussion of Amendments

By way of the amendment instructions above claims 11-20 directed toward a patentably distinct invention non-elected for prosecution have been canceled. Cancellation of such non-elected claims has however been effected without prejudice to the applicants' rights under 35 USC §121.

Independent claim 1 has been amended in an effort to clarify the same. Specifically, claim 1 now requires that the polymerization zone be at a temperature between about 30°C to about 120°C. Support for this amendment can be found in the originally filed specification at page 14, lines 21-22.

Claim 21 is new and defines the residence time of the droplets in the reaction zone of between about 30 seconds to about 1800 seconds as described on page 14, lines 23-24 of the specification.

Therefore, following entry of this amendment, claims 1-10 and 21 will remain pending herein for which favorable action is solicited.

2. Response to Drawing Objection

A replacement sheet of drawings in which the reproduction of the photomicrographs of Figs. 4a and 4b has been improved is being filed concurrently herewith. It is believed that that replacement sheet of drawings renders moot the objections raised thereagainst in the Official Action. Withdrawal of such objections is therefore in order.

3. Response to Art-Based Rejections

Prior claims 1-4 and 8-10 attracted a rejection under 35 USC §102(b) as allegedly anticipated by Levendis et al (USP 5,269,980). In addition, claims 5-6 were rejected under 35 USC §103(a) as allegedly “obvious”, and hence unpatentable, over Levendis et al in view of Jones et al (USP 4,547,468) while claim 7 was rejected separately under the same statutory provision based on Levendis et al and Mosso et al (US 2001/0051118). Applicants suggest that none of the applied publications is appropriate as a reference against the pending claims herein.

Specifically, applicants note that Levendis et al teach the necessity of performing polymerization within the reactor at very high temperatures, namely at a temperature profile that is above 150⁰C (see claim 1 of Levendis et al at column 6, line 51). In fact, many of the Examples require a reactor temperature profile which greatly exceeds 150⁰C, e.g., 300⁰C at the reactor upper section and 400⁰C at the reactor lower section as in Example 1. Levendis et al therefore could not operate with monomers such as acrylic acid in water as it would evaporate at such elevated temperatures prior to polymerization in the reactor.

In direct contrast, according to the present invention, the droplets are exposed to polymerization conditions in the reaction zone of a between about 30⁰C to about 120⁰C. Surprisingly, according to the present invention, such low temperature conditions nonetheless permit polymeric microspheres to be formed. And as noted above, the low temperature reaction zone conditions permit monomers such as acrylic acid in water to be polymerized to form microspheres that would not be possible with the technology of Levendis et al.

Thus, the presently claimed invention cannot be anticipated by Levendis et al. Withdrawal of the rejection advanced under 35 USC §102(b) is therefore in order.

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Nor is the presently claimed invention "obvious" from Levendis et al when considered with either Jones et al or Mosso et al. In this regard, Levendis et al actually teach the ordinarily skilled person that higher -- not lower -- reaction zone temperatures are required in order to form polymerized microspheres. Jones et al simply teach that counter-current flow may improve residence time in spray drying. Mosso et al merely teaches that light absorbing additives may be included in the reaction system. As such, neither Jones et al nor Mosso et al cure the deficiencies of Levendis et al as described above.

Withdrawal of the rejections advanced under 35 USC §103(a) is therefore also in order.

4. Fee Authorization

The Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, in the fee(s) filed, or asserted to be filed, or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Account No. 14-1140.

Respectfully submitted,

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